UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 West Jackson Boulevard
CHICAGO, IL 60604

DATE:

SUBJECT: Operating Parameter Limits for Veolia ES Technical Solutions, LLC, Sauget, IL

FROM: Charles Hall, Environmental Engineer
MN/OH Air Enforcement and Compliance Assurance Section

TO: File, Veolia ES Technical Solutions, LLC, Sauget, IL

THROUGH: William MacDowell, Chief
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This memorandum evaluates whether the operating parameter limits ("OPLs") that Veolia ES Technical Solutions, LLC ("Veolia") has submitted in its application for a Clean Air Act Part 71 operating permit demonstrate compliance with the emission standards for dioxins/furans, mercury, semivolatile metals ("SVM"; cadmium and lead), low volatile metals ("LVM"; arsenic, beryllium, and chromium), hydrogen chloride/chlorine gas ("HCl/Cl_2"), and particulate matter ("PM") and the destruction and removal efficiency ("DRE") standard.

Regulatory Background

The National Emission Standard for Hazardous Air Pollutants from Hazardous Waste Combustors, 40 C.F.R. 63, Subpart EEE (hereinafter, “the HWC MACT”) sets forth emission standards for dioxins/furans, mercury, SVM, LVM, carbon monoxide, total hydrocarbon, HCl/Cl_2, PM and DRE. The standards set forth in 40 C.F.R. § 63.1203(a) and (c) are applicable between September 30, 2003, and October 13, 2008. On and after October 14, 2008, Veolia will be subject to the standards set forth in 40 C.F.R. § 63.1219(a) and (c).

The HWC MACT requires the owner to conduct a comprehensive performance test ("CPT") to demonstrate compliance with the standards and to establish OPLs for DRE, dioxins/furans, mercury, PM, SVM, LVM, and HCl/Cl_2. Pursuant to 40 C.F.R. §§ 63.7(e) and 63.1207(g)(1), Veolia must conduct the CPT under operating conditions representative of the extreme range of

normal conditions. This allows the Agency to reasonably assume that compliance with the OPLs corresponds with compliance with the standards under normal operating conditions.

Pursuant to 40 C.F.R. §§ 63.1207(f)(1)(x), 63.1209(l)(1), and 63.1209(n)(2), an owner may request EPA's approval to extrapolate mercury feed rates and associated emission rates during the comprehensive performance test to higher allowable feed rate limits and emission rates. In its review, EPA must consider: 1, whether metal feed rates during the performance test are appropriate (i.e., whether feed rates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and 2, whether the extrapolated feed rates the source requests are warranted considering historical metal feed rate data.

Pursuant to 40 C.F.R. § 63.1207(c)(2), Veolia may request that previous emissions test data serve as documentation of conformance with the emission standards of this subpart provided that the previous testing resulted in data that meet quality assurance objectives (determined on a site-specific basis) such that the results demonstrate compliance with the applicable standards; conformed with the requirements of 40 C.F.R. § 63.1207(g)(1); and was sufficient to establish the applicable OPLs under § 63.1209. 40 C.F.R. § 63.1207(g)(1)(A) requires Veolia to feed chlorine at its normal or higher feed rate during the dioxin/furan performance test. 40 C.F.R. § 63.1207(g)(1)(B) requires Veolia to feed ash at normal or higher feed rate during the SVM and LVM performance tests and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used. 40 C.F.R. § 63.1207(g)(1)(C) requires Veolia to conduct the following tests when the PM control device undergoes its normal or more frequent cleaning cycle: The PM, SVM, and LVM performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used.

Facility Background

Veolia owns and operates three hazardous waste incinerators (Incinerators #2, #3, and #4) at its Sauget, Illinois, facility. The major components of each incinerator include waste feed systems, a primary combustion chamber, a secondary combustion chamber, a spray dry adsorber, a baghouse, an induced draft fan, and a stack. Incinerator #4 also has a tempering chamber, an

activated carbon injection system, and a second baghouse.

Discussion

On December 29, 2003, Veolia submitted to EPA and Illinois EPA a CPT plan. Illinois EPA is delegated to implement the HWC MACT except for answering alternative monitoring requests. EPA assumed that Illinois EPA would formally respond to the CPT Plan. Although EPA does not know the exact date(s), Illinois EPA and Veolia representatives met to discuss the CPT Plan. Illinois EPA provided comment on the CPT Plan verbally, but did not provide written comments. In response to discussions between Illinois EPA and Veolia, on July 24, 2006, Veolia revised the requests for alternative monitoring requirements. On November 13, 2006, EPA answered the alternative monitoring requests.

Missing OPLs

On May 2, 2007, Veolia submitted to EPA an application for a Clean Air Act Part 71 operating permit. Appendix C of the Application includes a list the proposed OPLs for Incinerators #2 and #3 and a list of the proposed OPLs for Incinerator #4. Veolia did not propose a value for the following applicable OPLs:

Table 1. OPLs Missing From Part 71 Application

HAP	Incinerator	OPL	Comment
D/F, Mercury	#4	Carbon specification	40 C.F.R. §§ 63.1209(k)(6)(iii) and 63.1209(l)(3)
PM, SVM/LVM	#2, #3, and #4	Baghouse leak detection system parameters	40 C.F.R. §§ 63.1209(m)(1)(iv) and 63.1209(n)(3)
LVM	#2, #3, and #4	Maximum Pumpable LVM Feed Rate	40 C.F.R. § 63.1209(n)(2)(vi)
HCl/Cl_2	#2, #3, and #4	Spray Dry Adsorber: Minimum Sorbent Feed Rate	40 C.F.R. § 63.1209(o)(4)(i)
HCl/Cl_2	#2, #3, and #4	Spray Dry Adsorber: Minimum Carrier Fluid Flow Rate or	40 C.F.R. § 63.1209(o)(4)(ii)

HAP	Incinerator	OPL	Comment
		Nozzle Pressure Drop	
HCl/Cl_2	#2, #3, and #4	Spray Dry Adsorber: Specify and use the Brand and Type of Sorbent used during the CPT	40 C.F.R. § 63.1209(o)(4)(ii)

Without establishing each of these OPLs, Veolia cannot assure compliance with the dioxin/furan, mercury, PM, SVM, LVM, and HCl/Cl_2 emission standards.

Pursuant to 40 C.F.R. § 63.1209(g)(1)(ii), EPA may waive an OPL specified in this section based on documentation that neither that OPL nor an alternative OPL is needed to ensure compliance with the emission standards of this subpart. However, Veolia has not requested that EPA waive the OPLs listed in Table 1. Consequently, these monitoring requirements remain in effect.

Problems with the CPT Plan Content

Without a valid and complete CPT, EPA cannot determine whether the resulting OPLs assure compliance. Because Veolia's CPT Plan is incomplete, EPA cannot determine whether the CPT was a valid and complete test sufficient to demonstrate compliance and to establish all applicable OPLs. The December 2003 CPT Plan does not include the following required information:

a. Pursuant to 40 C.F.R. § 63.1207(f)(1)(i)(A), an analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feed stocks, as fired, that includes the heating value, concentrations of ash, low volatile metals (LVM; arsenic, beryllium, and chromium), semivolatile metals (SVM; cadmium and lead), mercury, and total (organic and inorganic) chlorine;

b. Pursuant to 40 C.F.R. § 63.1207(f)(1)(ii)(A), the identity of each organic HAP established by 42 U.S.C. § 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by § 63.60, that is present in each hazardous waste feed stream.

c. Pursuant to 40 C.F.R. § 63.1207(f)(1)(ii)(B), within the precision produced by analytical procedures of 40 C.F.R.

§ 63.1208(b)(8), the approximate quantification of the identified organic HAPs in the hazardous waste feedstreams.

d. Pursuant to 40 C.F.R. § 63.1207(f)(1)(iii)(G), a detailed engineering description of the design, operation, and maintenance practices for any air pollution control system for each hazardous waste incinerator.

e. Pursuant to 40 C.F.R. § 63.1207(f)(1)(iv), a detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

f. Pursuant to 40 C.F.R. § 63.1207(f)(1)(v), a detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned.

g. Pursuant to 40 C.F.R. § 63.1207(f)(1)(vi), a detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the HWC to meet the emission standards.

h. Pursuant to 40 C.F.R. § 63.1207(f)(1)(vii), a description of, and planned operating conditions for, any emission control equipment that will be used.

i. Pursuant to 40 C.F.R. § 63.1207(f)(1)(xi), documentation of the expected levels of regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems feedstreams if the owner does not continuously monitor regulated constituents in those feedstreams;

j. Pursuant to 40 C.F.R. § 63.1207(f)(1)(xix), documentation of the temperature measurement location.

k. For Incinerator 4 only, pursuant to 40 C.F.R. § 63.1207(f)(1)(xx)(A), documentation of the manufacturer specifications for minimum carrier fluid flowrate or pressure drop.

l. For Incinerator 4 only, pursuant to 40 C.F.R. § 63.1207(f)(1)(xx)(B), documentation of the key parameters that affect carbon adsorption, and the operating limits Veolia establishes for those parameters based on the carbon used during the performance test, if you elect not to specify and use the brand and type of carbon used during the CPT.

m. Pursuant to 40 C.F.R. § 63.1207(f)(1)(xxv), documentation of the key parameters that affect adsorption of HCl/Cl_2 and the limits that the owner will establish for those parameters based on the sorbent used during the CPT.

n. Pursuant to 40 C.F.R. § 63.1207(f)(1)(xxvi), for purposes of calculating SVM, LVM, mercury, total (organic and inorganic) chlorine, and ash feed rate limits, a description of how the company will handle performance test feed stream analytical results that determines these constituents are not present at detectable levels.

o. Pursuant to 40 C.F.R. §§ 63.1207(f)(1)(xxvii) and 63.1219(c)(3)(ii), the identity of one or more principal organic hazardous constituent(s) that represent the most difficult to destroy organic compounds in its hazardous waste feedstreams. Veolia must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

Data In Lieu Request

Pursuant to 40 C.F.R. § 63.1207(c)(2)(i), the owner of a hazardous waste incinerator may request that previous emissions test data serve as documentation of conformance with the emission standards of this subpart provided that the previous testing:[1]

a. Results in data that meet quality assurance objectives (determined on a site-specific basis) such that the results demonstrate compliance with the applicable standards;

b. Was in conformance with the requirements of 40 C.F.R. § 63.1207(g)(1); and

1 40 C.F.R. § 63.1207(c)(2)(iii) negates a fourth condition (pertaining to age of the data) in 40 C.F.R. § 63.1207(c)(2)(i).

c. Was sufficient to establish the applicable OPLs under 40 C.F.R. § 63.1209.

Veolia wanted to use test data from Incinerator #2 to demonstrate compliance and establish OPLs for Incinerator #3. The Boiler and Industrial Furnace ("BIF") Rule (40 C.F.R. Part 266, Subpart H, promulgated under the authority of the Resource Conservation and Recovery Act), explicitly allowed an owner to use data from one affected source to demonstrate compliance for another nominally identical source. See 40 C.F.R. § 266.103(c)(3)(i). EPA copied many requirements from the BIF Rule directly into the HWC MACT. However, EPA did not copy 40 C.F.R. § 266.103(c)(3)(i) into the HWC MACT. Consequently, EPA has not allowed an owner of a HWC to use data from one combustor to demonstrate compliance for another combustor. Further, Veolia has not yet demonstrated to EPA's satisfaction that Incinerators #2 and #3 are identical: Incinerator #2's baghouse has four modules, and Incinerator #3's baghouse has three modules. This difference may affect the emissions of dioxin/furan, mercury, PM, SVM, LVM, and HCl/Cl_2.

Even if EPA accepts Veolia's claim that Incinerators #2 and #3 are identical or that the difference between them is insignificant, under the Clean Air Act, EPA has generally been reluctant to waive the requirement to conduct a performance test. EPA regards Veolia's data in lieu request as a request to waive the requirement to conduct a CPT on Incinerator #3. Although 40 C.F.R. § 63.1207(c)(2)(i) does not explicitly prohibit using data from one incinerator to demonstrate compliance for another incinerator, EPA has waived the requirement to conduct a performance test in very limited circumstances. EPA has approved performance test waivers for numerous natural gas-fired steam generating units and stationary gas turbines. Natural gas has a consistent composition. Consequently, the owner or operator of a natural gas-fired steam generating unit can reliably predict that the emission concentrations of sulfur dioxide and oxides of nitrogen will comply with their emission standards. Further, EPA can reasonably assume that two natural gas-fired steam generating units with an identical design will have similar, if not identical, emissions. EPA has waived the requirement to conduct a DRE performance test for one hazardous waste burning cement kiln. EPA has a large data set of performance test results for hazardous waste-burning cement kilns that demonstrate compliance with the DRE by substantial margins.

By contrast, hazardous waste incinerators burn wastes that can vary widely in their heat content and elemental composition. Waste streams can vary from one hour to the next. Liquid wastes can separate into two or more phases. Consequently, EPA cannot reasonably assume that a hazardous waste incinerator - especially one such as Veolia that accepts hazardous waste from numerous generators - burns a homogenous waste stream.

On September 30, 2005, EPA issued the Clean Air Act National Stack Testing Guidance. This guidance compiled stack testing determinations that EPA had issued since the early 1970s. The guidance sets forth four criteria under which a waiver may be appropriate:

(1) the units are located at the same facility;

(2) the units are produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specifications;

(3) the units are operated and maintained in a similar manner; and

(4) the delegated agency, based on documentation submitted by the facility,

    (a) determines that the margin of compliance for the identical units tested is significant and can be maintained on an on-going basis; or

    (b) determines based on a review of sufficient emissions data that, though the margin of compliance is not substantial, other factors allow for the determination that the variability of emissions for identical tested units is low enough that the agency can be confident that the untested unit will be in compliance. These factors may include, but are not limited to, the following:

        (i) historical records at the tested unit showing consistent/invariant load;

        (ii) fuel characteristics yielding low variability (e.g., oil) and therefore assurance that emissions will be constant and below allowable levels;

(iii) statistical analysis of a robust emissions data set demonstrate sufficiently low variability to convey assurance that the margin of compliance, though small, is reliable.

EPA acknowledges that Incinerators #2 and #3 are located at the same facility and assumes that Veolia operates and maintains them in a similar manner. However, Veolia has not demonstrated that the margin of compliance for Incinerators #2 and #3 is significant and can be maintained on an on-going basis. Further, Veolia has not demonstrated that, though the margin of compliance is not substantial, other factors allow for the determination that the variability of emissions for identical tested units is low enough that the agency can be confident that the untested incinerator will be in compliance. In particular, we do not have historical records at either incinerator showing consistent/invariant load. In all three incinerators, Veolia uses natural gas or #2 fuel oil as an auxiliary fuel to start-up and obtain the desired temperature. The consistency of the auxiliary fuels is not at issue here. It is the inconsistency of the wastes that Veolia burns. Veolia operates three commercial hazardous waste incinerators in which it burns hazardous waste from numerous generators. Further, Veolia may not know the exact composition of the hazardous waste that it burns. Finally, EPA does not have a large set of test results for either Incinerator #2 or #3. Consequently, EPA cannot determine whether previous tests demonstrate sufficiently low variability to assure that the margin of compliance, though small, is reliable. For these reasons, EPA cannot waive the requirement to conduct a CPT on Incinerator #3.

General Problems with Usability of Data from Previous Tests

EPA has reports for three tests on Incinerator #2 (November 2002, September 2003 and May 2004); four on Incinerator #3 (January 1997, August 2002 (two conditions), November 2002, and May/June 2006; and five on Incinerator #4 (February 1996, August 2002, November 2002, September 2003 (two conditions), and May 2004. Tables 2 and 3 summarize the test results and feed rate data that EPA has for these tests. Veolia may have fed chlorine at its normal or higher feed rate during the previous dioxin/furan tests, but Veolia did not document the feed rate in the test report. Even if the test report included chlorine feed rate documentation, EPA would not know how that rate compares to Veolia’s normal chlorine feed rate. Similarly, Veolia may have fed ash at its normal or higher feed rate during the previous

SVM and LVM tests. Even though Veolia documented the SVM and LVM feed rates for some tests, EPA does not know how that feed rate compares to Veolia's past operating rates. During the PM, SVM, LVM and, for Incinerator #4, dioxin/furan and mercury, performance tests, Veolia may have operated each baghouse with its normal or more frequent cleaning cycle. However, Veolia did not document the normal cleaning frequency in any of the test reports.

Problems with Veolia's Intent to Extrapolate

In Section 1.2 of the CPT Plan, Veolia indicated that it intended to utilize an extrapolation procedure, as appropriate, to establish metals feed rate limits. However, Veolia did not include the following information that 40 C.F.R. §§ 63.1207(f)(1)(x), 63.1209(l)(1), and 63.1209(n)(2) require:

a. A description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards;

b. Documentation of the historical range of normal and maximum (i.e., other than during compliance testing) metals feed rates for each feedstream;

c. Documentation that the level of spiking recommended during the performance test will mask sampling and analysis imprecision and inaccuracy to the extent that the extrapolated feed rate limits adequately assure compliance with the emission standards;

d. Documentation of whether some level of spiking would be appropriate and whether the physical form and species of spiked material is appropriate; and

e. An estimate of the extrapolated LVM, SVM, and mercury feed rates.

Veolia has not submitted this information in any other separate written communication to either EPA or Illinois EPA. Consequently, Veolia may not extrapolate its metal feed rates based upon the performance tests that it has conducted.

Operating Parameter Problems

Pursuant to 40 C.F.R. § 63.1209(j) through (p), Veolia must establish OPLs to assure continuous compliance with the DRE,

dioxin/furan, mercury, PM, SVM/LVM, and HCl/Cl_2 standards. Veolia must determine most of the OPL values from data collected during a CPT. The HWC MACT allows Veolia to base some OPL values upon the manufacturer's specifications. Veolia has not proposed a value for some applicable values, and has not conducted the performance tests to establish other OPLs. Tables 4, 5, and 6 summarize the OPLs for Incinerators #2, #3, and #4, respectively, that EPA believes do not assure compliance with the pertinent emission standard.

The HWC MACT does not explicitly require Veolia to establish all OPLs based upon a single CPT. However, EPA can reasonably expect Veolia to establish closely related OPLs (e.g., the minimum PCC temperature and the minimum SCC temperature) and all OPLs for each HAP from one test's operating data. For OPLs where Veolia has not conducted the CPT, EPA does not know whether the proposed OPL value assures compliance with that HAP's emission standard.

Conclusion

None of these flaws by itself is fatal to a credible assurance of compliance with the HWC MACT's standards. However, all of the flaws together create significant doubt about whether the OPLs assure compliance. The HWC MACT does not require Veolia to establish all of its OPLs from one CPT, but the other two commercial hazardous waste incinerators (Ross Incineration Services, Grafton, Ohio, and Von Roll America, East Liverpool, Ohio) in Region 5 did so. EPA approved 3M's 2003 data in lieu request for its Cottage Grove, Minnesota, incinerator in part because 3M did not ask to establish the OPLs for one standard from three different tests and did not ask to establish two closely related OPLs from different tests. (For example, the minimum PCC and SCC temperature OPLs came from the same test.)

Although continuous emission monitors (CEM) for dioxin/furan, mercury, PM, SVM/LVM, and HCl/Cl_2 do exist, the HWC MACT does not require them.[2] EPA has not promulgated a performance specification for HCl/Cl_2 CEMS. A DRE CEM is technically possible, but the case engineer does not know of any facility that uses one. Until EPA requires a CEM for each standard, we will have to rely upon OPLs as surrogates for them. In order for OPLs to assure compliance reliably, the owner or operator must establish OPLs from CPT operating data on the same incinerator, under known test operating conditions. In the

2 EPA has promulgated a performance specification for PM CEMS. However, EPA has not promulgated the applicable operational requirements.

absence of complete information regarding the OPLs, EPA does not know whether the OPLs proposed in Veolia's Part 71 permit application assure compliance with the HWC MACT. Until Veolia completely documents the process by which it establishes its OPLs, the case engineer recommends that EPA not assume that the proposed OPLs assure compliance with the HWC MACT's standards.

Table 2. Dioxin/furan, Mercury, SVM, and LVM Performance Test Results

Pollutant	D/F	Hg Feed Rate	Hg	SVM feed rate	SVM	LVM feed rate	LVM
63.1219(a) Emission Standard @ 7% O_2	0.2		130		230		92
Units	ng/dscm	lb/hr	µg/dscm	lbs/hr	µg/dscm	lbs/hr	µg/dscm
Test Date							
Incinerator #2							
11/20/02[3]	0.065		155.42		8.44		34.21
09/18/03	0.22	0.00139	58.3	64.32	3.7	45.11	2.7
05/05/04	0.054	0.00176	13.5	64.32		45.28	
Incinerator #3							
01/27/97	0.088						
08/22/02 cond. 1[3]	0.345		1192.40		4.10		8.36
08/22/02 cond. 2[3]	1.019		1312.98		8.26		11.77
11/19/02	0.04		101.35		4.71		12.23
05/10/06		0.00139	61.5	64.3	16.6	45.1	249.56
06/19/06	0.024	0.00176		74.76		45.28	7.61
Incinerator #4							
02/22/96[4]	51.1						
08/20/02	0.118		725.7		106.01		89.48
11/21/02	0.06		315.8		8.80		10.26
09/16/03 cond. 1	0.05	0.05472	266.6	116.79	198.7	48.74	31.0
09/16/03 cond. 2	0.04	0.18610	553.1	120.76	219.8	47.60	36.0
05/04/04		0.01162	17.9				

3 Only two runs for D/F, metals, and PM.
4 D/F results table does not include O2% or state whether result was corrected to 7% O2. PM results table results corrected to 7% O2.

Table 3. HCl/Cl_2, PM, and DRE Performance Test Results

Pollutant	Chlorine feed rate	HCl/Cl_2	Ash feed rate	PM	DRE		
63.1219(a) Emission Standard @ 7% O_2	rate	32		0.013			
Units	lbs/hr	ppmV	lbs/hr	gr/dscf	99.99%	99.99%	99.99%
Test Date							
Incinerator #2							
11/20/02[5]		10.8		0.0023			
09/18/03							
05/05/04							
Incinerator #3							
					CCl_4	C_2Cl_4	123TCB
01/27/97		Note[6]		0.0010	99.99%+	99.99%+	99.99%+
08/22/02 cond. 1[5]	200-250	24.6		0.0017			
08/22/02 cond. 2[5]	200-250	12.4		0.0023			
11/19/02		8.45		0.0013			
05/10/06				0.0028			
06/19/06				0.0012			
Incinerator #4							
					MCB	HCE	NAP
02/22/96		Note[6]		0.0074	99.99%+	99.99%+	99.99%+
08/20/02				0.0145			
11/21/02		11.46		0.0019			
09/16/03 cond. 1							
09/16/03 cond. 2							
05/04/04							

5 Only two runs for HCl/Cl_2.
6 Consistent with 40 CFR 264, Subpart O, Veolia reported the emission rate in pounds per hour.

Abbreviations for Tables 2 and 3.

CCl_4 = carbon tetrachloride
C_2Cl_4 = tetrachloroethene
gr/dscf = grain per dry standard cubic foot
D/F = dioxin/furan
HCE = hexachloroethane
lb(s)/hr = pound(s) per hour
µg/dscm = micrograms per dry standard cubic meter
MCB = monochlorobenzene
ng/dscm = nanogram per dry standard cubic meter
NAP = naphthalene
ppmV = parts per million by volume
123TCB = 1,2,3-trichlorobenzene

Table 4. Incinerator #2 OPLs.

HAP	OPL for Unit #2	OPL Value	Comment
DRE, D/F	Minimum PCC Temperature	1,712°F	EPA does not have the results of a DRE test on Incinerator #2. Veolia proposed to use this value from a May 2004 D/F test. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(A), Veolia must feed chlorine at a normal or higher feed rate during a D/F test. EPA does not know whether Veolia did so.
DRE, D/F	Minimum SCC Temperature	1,845°F	Veolia proposed to use this value from a January 1997 test on Incinerator #3. EPA does not know whether this OPL value corresponds with D/F compliance for Incinerator #2. Veolia has not conducted a DRE test on Incinerator #2.
DRE, D/F, PM, SVM/LVM,	Maximum Flue Gas Flow Rate	15,534 acfm	Veolia proposed to use this value from a September 2003 test. Veolia did not comply with the D/F standard during the September 2003 test and did not conduct a test for DRE, PM, SVM/LVM,

HAP	OPL for Unit #2	OPL Value	Comment
HCl/Cl_2			or HCl/Cl_2.
DRE, D/F	Maximum PCC Pumpable Waste Feed Rate	3,123 lbs/hr	Veolia proposed to use this value from a May 2004 test. Veolia has not conducted a DRE test on Incinerator #2. Veolia has not conducted a DRE test on Incinerator #2.
DRE, D/F	Maximum PCC Total Waste Feed Rate	4,301 lbs/hr	Veolia proposed to use this value from a May 2004 test. Veolia has not conducted a DRE test on Incinerator #2. EPA does not know whether this value corresponds with DRE compliance.
D/F, SVM/LVM	Maximum Dry PM APCD Inlet Temperature	420°F	Veolia proposed to use this value from a May 2004 test. Veolia did not conduct a SVM/LVM test in May 2004. EPA does not know whether this value corresponds with SVM/LVM compliance.
Hg	Maximum Hg Feed Rate	0.0073 lb/hr	Veolia extrapolated the feed rate and emission concentration from a May 2004 test. Veolia complied with the HWC MACT's mercury emission standard. EPA could approve 0.00095 lb/hr as mercury feed rate OPL, the feed rate during the May 2004 test.
PM, SVM/LVM	Baghouse leak detection system parameters	None proposed	Veolia must propose baghouse leak detection system parameters or other reliable and representative baghouse OPLs.
PM	Maximum Ash Feed Rate	673 lbs/hr	Veolia proposed to use this value from a January 1997 test on Incinerator #3. EPA does not know whether this OPL value corresponds with PM compliance for Incinerator #2. Ash is all incombustible material in a waste sample. Arsenic, beryllium, cadmium, chromium, lead, and mercury are not combustible. Consequently, the maximum ash feed rate must be higher than the combined maximum LVM and SVM feed rates.
SVM	Maximum SVM Feed Rate	3,477 lbs/hr	Veolia extrapolated the feed rate and emission concentration from a September 2003 test. Veolia complied with the HWC MACT's SVM emission standard. EPA could approve 67 lbs/hr as the SVM

HAP	OPL for Unit #2	OPL Value	Comment
			feed rate OPL. Veolia's normal SVM feed rate for Incinerator #2 is unknown. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Total LVM Feed Rate	1,264 lbs/hr	Veolia extrapolated the feed rate and emission concentration from a September 2003 test. Veolia complied with the HWC MACT's SVM emission standard. EPA could approve 44 lbs/hr as the LVM feed rate OPL. Veolia's normal LVM feed rate for Incinerator #2 is unknown. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Pumpable LVM Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(n)(2)(vi), Veolia must establish separate feed rate limits for LVMs in pumpable feedstreams using the procedures prescribed above for total LVMs.
SVM/LVM, HCl/Cl_2	Maximum HCl/Cl_2 Feed Rate	237 lbs/hr	Veolia proposed to use this value from a January 1997 test on Incinerator #3. EPA does not know whether this OPL value corresponds with HCl/Cl_2 compliance for Incinerator #2. During an August 2002 test on Incinerator #3, the chlorine feed rate was between 200 and 250 lbs/hr. Thus, Veolia's actual chlorine feed rate may be higher than 237 lbs/hr.
HCl/Cl_2	Spray Dry Adsorber: Minimum Sorbent Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(i), Veolia must establish a minimum sorbent feed rate OPL.
HCl/Cl_2	Spray Dry Adsorber: Minimum Carrier	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must establish a minimum carrier fluid flow rate

HAP	OPL for Unit #2	OPL Value	Comment
	Fluid Flow Rate or Nozzle Pressure Drop		or nozzle pressure drop OPL.
HCl/Cl_2	Spray Dry Adsorber: Specify and use the Brand and Type of Sorbent used during the CPT	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must specify and use the brand (i.e., manufacturer) and type of sorbent used during the CPT until a subsequent CPT is conducted.

Table 5. Incinerator #3 OPLs.

HAP	OPL for Unit #3	OPL Value	Comment
DRE, D/F	Minimum PCC Temperature	1,712°F	Veolia proposed to use this value from a May 2004 test on Incinerator #2. EPA does not know whether this OPL value corresponds with D/F compliance for Incinerator #3. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(A), Veolia must feed chlorine at a normal or higher feed rate during a D/F test. EPA does not know whether Veolia did so. Veolia did not conduct a HCl/Cl_2 test on Incinerator #2 in May 2004.
DRE, D/F	Minimum SCC Temperature	1,845°F	Veolia proposed to use this value from a January 1997 test on Incinerator #3. The case engineer believes that Veolia should establish the minimum PCC and SCC temperature OPLs during the same test.
DRE, D/F, PM, SVM/LVM, HCl/Cl_2	Maximum Flue Gas Flow Rate	15,534 acfm	Veolia proposed to use this value from a September 2003 test on Incinerator #2. EPA does not know whether this OPL value corresponds with DRE, D/F, PM, SVM/LVM, HCl/Cl_2 compliance for Incinerator #3.

HAP	OPL for Unit #3	OPL Value	Comment
DRE, D/F	Maximum PCC Pumpable Waste Feed Rate	3,123 lbs/hr	Veolia proposed to use this value from a May 2004 test on Incinerator #2. EPA does not know whether this OPL value corresponds with DRE and D/F compliance for Incinerator #3.
DRE, D/F	Maximum PCC Total Waste Feed Rate	4,301 lbs/hr	Veolia proposed to use this value from a May 2004 test on Incinerator #2. EPA does not know whether this OPL value corresponds with DRE and D/F compliance for Incinerator #3.
D/F, SVM/LVM	Maximum Dry PM APCD Inlet Temperature	420°F	Veolia proposed to use this value from a May 2004 test on Incinerator #2. EPA does not know whether this OPL value corresponds with D/F and SVM/LVM compliance for Incinerator #3.
Hg	Maximum Hg Feed Rate	0.0073 lb/hr	Veolia proposed to use this value from a May 2004 test on Incinerator #2. EPA does not know whether this OPL value corresponds with mercury compliance for Incinerator #3. Veolia extrapolated the feed rate and emission concentration from a May 2004 test. Veolia complied with the HWC MACT's mercury emission standard. EPA could approve 0.00139 lb/hr as mercury feed rate OPL, the feed rate during a June 2006 test.
PM, SVM/LVM	Baghouse leak detection system parameters	None proposed	Veolia must propose baghouse leak detection system parameters or other reliable and representative baghouse OPLs.
PM	Maximum Ash Feed Rate	673 lbs/hr	Ash is all incombustible material in a waste sample. Arsenic, beryllium cadmium, chromium, lead, and mercury are not combustible. Consequently, the maximum ash feed rate must be higher than the combined maximum LVM and SVM feed rates. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance

HAP	OPL for Unit #3	OPL Value	Comment
			tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
SVM	Maximum SVM Feed Rate	3,477 lbs/hr	Veolia proposed to use this value from a September 2003 test on Incinerator #2. EPA does not know whether this OPL value corresponds with SVM compliance for Incinerator #3. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Total LVM Feed Rate	1,264 lbs/hr	Veolia proposed to use this value from a September 2003 test on Incinerator #2. EPA does not know whether this OPL value corresponds with LVM compliance for Incinerator #3. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Pumpable LVM Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(n)(2)(vi), Veolia must establish separate feed rate limits for LVMs in pumpable feedstreams using the procedures prescribed above for total LVMs.
SVM/LVM, HCl/Cl_2	Maximum HCl/Cl_2 Feed Rate	237 lbs/hr	During an August 2002 test, the chlorine feed rate was between 200 and 250 lbs/hr. Veolia conducted only two runs of the HCl/Cl_2 test. The HWC MACT requires Veolia to conduct three runs of the HCl/Cl_2 test to demonstrate compliance with the HCl/Cl_2 emission standard. Consequently, Veolia cannot use the data from the August 2002 test to demonstrate compliance or to establish OPLs. Veolia's actual chlorine feed rate may be higher than 237 lbs/hr.

HAP	OPL for Unit #3	OPL Value	Comment
HCl/Cl_2	Spray Dry Adsorber: Minimum Sorbent Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(i), Veolia must establish a minimum sorbent feed rate OPL.
HCl/Cl_2	Spray Dry Adsorber: Minimum Carrier Fluid Flow Rate or Nozzle Pressure Drop	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must establish a minimum carrier fluid flow rate or nozzle pressure drop OPL.
HCl/Cl_2	Spray Dry Adsorber: Specify and use the Brand and Type of Sorbent used during the CPT	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must specify and use the brand (i.e., manufacturer) and type of sorbent used during the CPT until a subsequent CPT is conducted.

Table 6. Incinerator #4 OPLs.

HAP	OPL for Unit #4	OPL Value	Comment
DRE, D/F	Minimum PCC Temperature	1,507°F	Veolia proposed to use this value from a September 2003 test. Veolia did not measure DRE in September 2003. EPA does not know whether this OPL value corresponds with DRE compliance.
DRE, D/F	Minimum SCC Temperature	1,886°F	Veolia proposed to use this value from a September 2003 test. Veolia did not measure DRE in September 2003. EPA does not know whether this OPL value corresponds with DRE compliance.
DRE, D/F, PM, SVM/LVM, HCl/Cl_2	Maximum Flue Gas Flow Rate	43,900 acfm	Veolia proposed to use this value from a September 2003 test. Veolia did not measure DRE in September 2003. EPA does not know whether this OPL value corresponds with DRE compliance.
DRE, D/F	Maximum PCC Pumpable Waste Feed Rate	4,262 lbs/hr	Veolia proposed to use this value from a September 2003 test. Veolia did not measure DRE in September 2003. EPA does not know whether this OPL value corresponds with DRE compliance.

HAP	OPL for Unit #4	OPL Value	Comment
DRE, D/F	Maximum PCC Total Waste Feed Rate	14,802 lbs/hr	Veolia proposed to use this value from a September 2003 test. Veolia did not measure DRE in September 2003. EPA does not know whether this OPL value corresponds with DRE compliance.
D/F, Mercury	Carbon specification	None proposed	Pursuant to 40 C.F.R. § 63.1209(k)(6)(iii), Veolia must specify and use the brand (i.e., manufacturer) and type of carbon used during the CPT until a subsequent CPT is conducted, unless Veolia documents in the site-specific performance test plan key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.
D/F, SVM/LVM	Maximum Dry PM APCD Inlet Temperature	435°F	Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
Hg	Maximum Hg Feed Rate	0.067 lb/hr	Veolia extrapolated the feed rate and emission concentration from a May 2004 test. Veolia complied with the HWC MACT's mercury emission standard. EPA could approve 0.0116 lb/hr as mercury feed rate OPL, the feed rate during the May 2004 test. Veolia's normal mercury feed rate for Incinerator #2 is approximately 0.0037 lb/hr.[7]
PM, SVM/LVM	Baghouse leak detection system parameters	None proposed	Veolia must propose baghouse leak detection system parameters or other reliable and representative baghouse OPLs.
PM	Maximum Ash Feed Rate	8,777 lbs/hr	
SVM	Maximum SVM Feed Rate	117 lbs/hr	Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance

7 Information from Mike Reed, IEPA, through Todd Ramaly, EPA. I do not have a document with this info.

HAP	OPL for Unit #4	OPL Value	Comment
			tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Total LVM Feed Rate	120 lbs/hr	Veolia extrapolated the feed rate and emission concentration from a September 2003 test. Veolia complied with the HWC MACT's LVM emission standard. EPA could approve 48.7 lbs/hr as LVM feed rate OPL, the feed rate during the September 2003 test. Pursuant to 40 C.F.R. § 63.1207(g)(1)(i)(B), Veolia must conduct the SVM and LVM performance tests while feeding normal (or higher) levels of ash. Veolia did not document that it was complying with this requirement.
LVM	Maximum Pumpable LVM Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(n)(2)(vi), Veolia must establish separate feed rate limits for LVMs in pumpable feedstreams using the procedures prescribed above for total LVMs.
SVM/LVM, HCl/Cl_2	Maximum HCl/Cl_2 Feed Rate	274 lbs/hr	
HCl/Cl_2	Spray Dry Adsorber: Minimum Sorbent Feed Rate	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(i), Veolia must establish a minimum sorbent feed rate OPL.
HCl/Cl_2	Spray Dry Adsorber: Minimum Carrier Fluid Flow Rate or Nozzle Pressure Drop	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must establish a minimum carrier fluid flow rate or nozzle pressure drop OPL.
HCl/Cl_2	Spray Dry Adsorber: Specify and use the Brand and Type of Sorbent used during the CPT	None proposed	Pursuant to 40 C.F.R. § 63.1209(o)(4)(ii), Veolia must specify and use the brand (i.e., manufacturer) and type of sorbent used during the CPT until a subsequent CPT is conducted.

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